UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,597	04/12/2005	Seung-Hee Yu	PNK0100US	9540

23413 7590 02/05/2009

CANTOR COLBURN, LLP
20 Church Street
22nd Floor
Hartford, CT 06103

EXAMINER
CHIU, TSZ K

ART UNIT	PAPER NUMBER
2822	

NOTIFICATION DATE	DELIVERY MODE
02/05/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptopatentmail@cantorcolburn.com

Office Action Summary	Application No.	Applicant(s)	
	10/501,597	YU ET AL.	
	Examiner	Art Unit	
	Tsz K. Chiu	2822	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 December 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *6-13 and 20-25* is/are pending in the application.

4a) Of the above claim(s) *14-19* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6-13 and 20-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claim 6-13 and 20-25 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 6-13 and 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawasaki et al. (6281552) in view of Nasu et al. (5496752).

With respect to claims 6, 9, 20, 24 and 25, Kawasaki discloses a gate wire formed on an insulating substrate (column 1, lines 6-10) and including a gate line and a gate electrode (102) connected to the gate line; a gate insulating film (105) covering the gate wire; a semiconductor layer (106) formed on the gate insulating film (105); a data wire formed on the gate insulating film (105) or the semiconductor layer (106) and including a data line, a source electrode (134) connected to the data line and located on the semiconductor layer (106) and a drain electrode (140) formed on the semiconductor layer (106) and located opposite the source electrode (134) with respect to the gate electrode (102); a passivation layer (157) covering the data wire; and a pixel electrode (161) including a transparent conductive material (column 8, lines 65-66) or a reflective

conductive material and connected to the drain electrode (140), wherein the gate wire or the data wire comprises a metal film (103) including a conductive material disposed on the insulating substrate (column 1, lines 6-10) or the gate insulating film (105).

Kawasaki did not discloses a the metal oxide film is a opaque metal oxide film including an oxide of a conductive material a side of the metal film (103) is uncovered by the metal oxide film.

Nasu disclose a the metal oxide film (figure 38b) is a opaque metal oxide film including an oxide of a conductive material a side of the metal film (50, For example Fig. 38b) is uncovered by the metal oxide film.

Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to use Nasu's material for the purpose of improving the image intensity in a light-emitting device whose bus-line overlies the device's light-emitting regions.

With respect to claim 7, Kawasaki discloses wherein the metal film (103) comprises one of Cr, Mo, Mo alloy, Al and Al alloy (column 5, lines 27-48)

With respect to claim 8, Nasu discloses the metal oxide film comprises one of oxides of Cr, Mo, Mo alloy, Al and Al alloy (column 26, lines 15-20).

With respect to claim 10, Kawasaki discloses wherein the gate wire further includes a gate pad (2139a) connected to the gate line, and the data wire further includes a data pad (152) connected to the data line, and the thin film transistor array panel further comprises: a subsidiary gate pad (2139a) including substantially the same layer as the pixel electrode (161) and connected to the gate pad (2139a); and a

subsidiary data pad (152) including substantially the same layer as the pixel electrode (161) connected to the data pad (152).

With respect to claim 11, Kawasaki discloses wherein the passivation film comprises SiOC, SiOF, SiNx or an organic insulating material (column 8, lines 31-43).

With respect to claim 12, Kawasaki discloses wherein the semiconductor layer (106) has substantially the same planar shape as the data wire excluding a channel portion between the source electrode (134) and the drain electrode (140).

With respect to claim 13, Kawasaki discloses wherein the pixel electrode (161) is located on the passivation layer (157), and the pixel electrode (161) and the drain electrode (140) are connected to each other via a first contact hole provided in the passivation layer (157).

With respect to claim 20, Naus discloses the metal oxide film (figure 38b) is formed on a entire top substantially horizontal surface of at least one of the data wire and the gate wire (50, For example Fig. 38b).

With respect to claim 21, Kawasaki discloses a plurality of color filters (column 18, lines 35-45) facing the pixel electrode (161)s, wherein the plurality of color filters block light (is inherently that color filter block lights since the filter is filtering light).

With respect to claim 22, Kawasaki a plurality of color filters (column 18, lines 35-45) facing the pixel electrode (161)s, wherein the plurality of color filters block light, wherein the portions of adjacent color filters of the plurality of color filters overlap with each other.

With respect to claim 23, Kawasaki discloses the gate wire and the data wire transmits signals and block light leakage between pixel areas (figure 15a-b).

With respect to claim 24 Kawasaki discloses drain electrode (140) comprises the metal film (103) the pixel electrode (161) is connected to the metal film (103) of the drain electrode (140).

However Kawasaki didn't disclose the drain electrode (140) comprises the metal oxide film and

Nasu disclose a the metal oxide film (figure 38b) is a opaque metal oxide film including an oxide of a conductive material a side of the metal film (50, For example Fig. 38b) is uncovered by the metal oxide film.

Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to use Nasu's material for the purpose of improving the image intensity in a light-emitting device whose bus-line overlies the device's light-emitting regions.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tsz K. Chiu whose telephone number is 571-272-8656. The examiner can normally be reached on 0800 to 1700.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra V. Smith can be reached on 571-272-2429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TC
January 31, 2009

/Ida M Soward/

Primary Examiner, Art Unit 2822